

67235
Impact Melt Breccia
936 grams

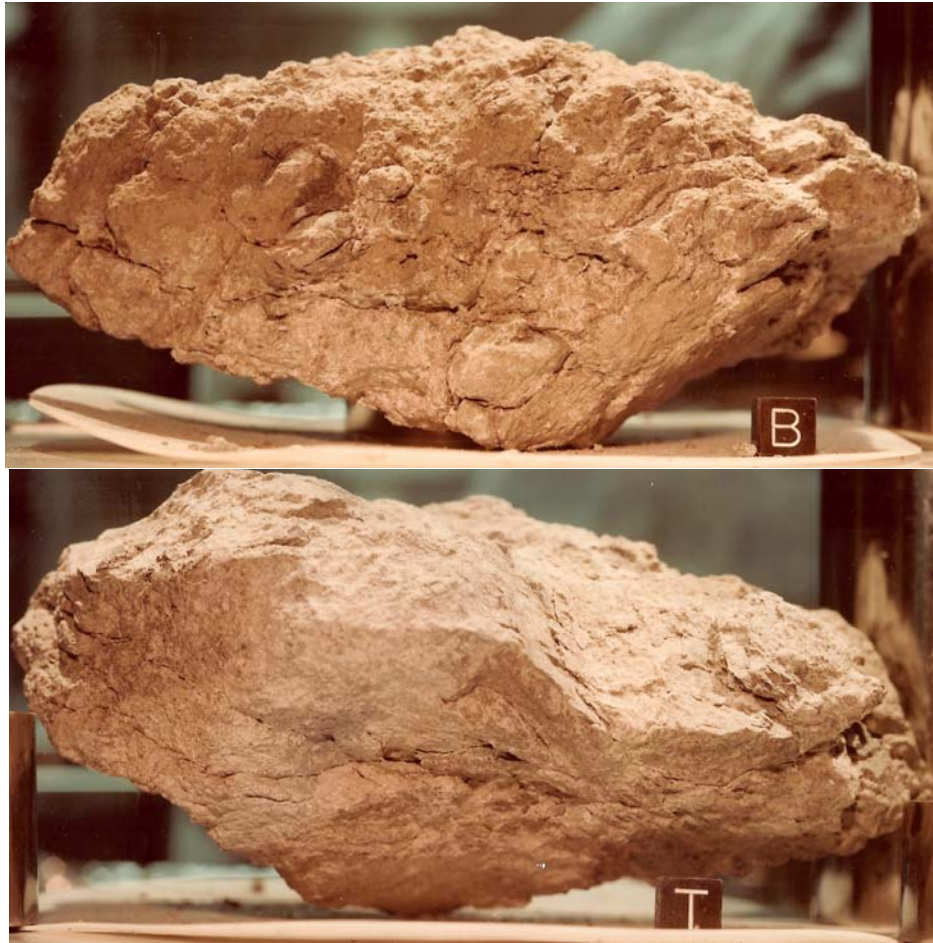


Figure 1a,b: Top and bottom of 67235. Cube is 1 cm. S80-30317 and 318

Introduction

67235 is a large special sample that was collected to study the outer surface of a lunar rock. It was returned in a special padded bag (Horz et al. 1972). However, 40 years later, it has still not been studied.

67235 was apparently found to lack special surface features. It breaks into small coherent rhombs. It appears to be homogeneous throughout.

This rock should be dated – probably by Ar/Ar.

Petrography

Two thin section, both from the same location, show 67235 to be a poikilitic impact melt rock (figure 2). Pyroxene oikocrysts enclose fragments of plagioclase.

Ilmenite occurs as clumps between pyroxene oikocrysts. This texture is consistent with impact melt rock.

Chemistry

Lindstrom and Salpus (1982) reported an analysis.

Processing

67235 has not been sawn, nor much disturbed.

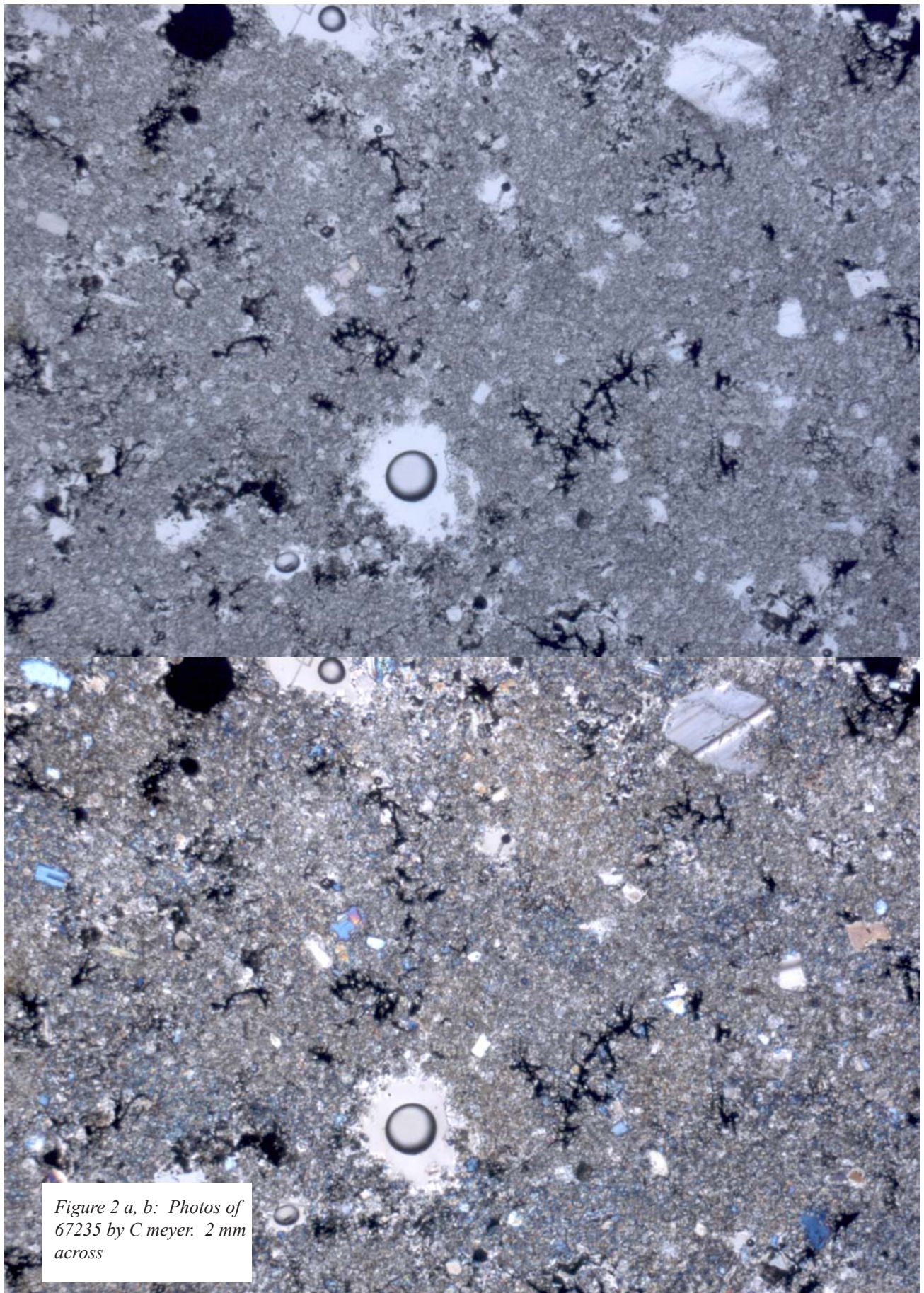


Figure 2 a, b: Photos of 67235 by C meyer. 2 mm across

Table 1. Chemical composition of 67235

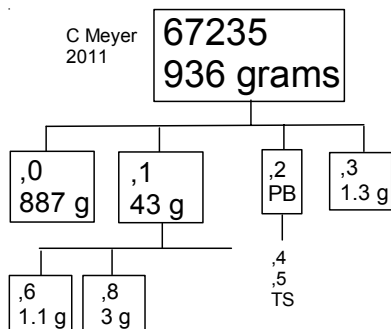
<i>reference</i>	Lindstrom 1982	
<i>weight</i>		
SiO ₂ %		
TiO ₂		
Al ₂ O ₃	20.1	(a)
FeO	7.23	(a)
MnO		
MgO	12.4	(a)
CaO	12.8	(a)
Na ₂ O	0.488	(a)
K ₂ O		
P ₂ O ₅		
S %		
<i>sum</i>		
Sc ppm	12.1	(a)
V		
Cr	1153	(a)
Co	29.7	(a)
Ni	465	(a)
Cu		
Zn		
Ga		
Ge ppb		
As		
Se		
Rb		
Sr	165	(a)
Y		
Zr		
Nb		
Mo		
Ru		
Rh		
Pd ppb		
Ag ppb		
Cd ppb		
In ppb		
Sn ppb		
Sb ppb		
Te ppb		
Cs ppm		
Ba	308	(a)
La	28.1	(a)
Ce	76.3	(a)
Pr		
Nd		
Sm	13.3	(a)
Eu	1.49	(a)
Gd		
Tb	2.78	(a)
Dy		
Ho		
Er		
Tm		
Yb	9.4	(a)
Lu	1.33	(a)
Hf	10.5	(a)
Ta	1.41	(a)
W ppb		
Re ppb		
Os ppb		
Ir ppb		
Pt ppb		
Au ppb		
Th ppm	4.9	(a)
U ppm	1.33	(a)
<i>technique</i>	(a) INAA	



Figure 3a: Thin section 67235,4. 1 cm across.



Figure 3b: Thin section 67235,5.



References for 67235.

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Hörz F., Carrier W.D., Young J.W., Duke C.M., Nagle J.S. and Fryxell R. (1972) Apollo 16 special samples. In Apollo 16 Preliminary Science Rpt. NASA SP-315 page 7-24 to 7-54

Lindstrom M.M. and Salpus P.A. (1982) Geochemical studies of feldspathic fragmental breccias and the nature of North Ray Crater Ejecta. *Proc. 13th Lunar Planet. Sci. Conf.* A671-A683. J. Geophys. Res.

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Ryder G. and Norman M.D. (1980) Catalog of Apollo 16 rocks (3 vol.). Curator's Office pub. #52, JSC #16904